

Original Article**Level Fatigue of Chronic Kidney Disease Patients Undergoing Hemodialysis**Adiyati Mardiyah¹, Restu Amalia Azmy¹¹*Nursing Diploma Study Program, University of Bangka Belitung Province of Bangka Belitung Islands, Indonesia*

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ABSTRACT

Background: The hemodialysis process is beneficial for chronic kidney disease patients in maintaining their lives. This routine and the continuous process will cause complications in the body. Fatigue is the main complaint of patients undergoing long-term hemodialysis. Fatigue conditions in patients with chronic kidney disease appear to be caused by physiological and psychological factors. The fatigue condition in the client will affect the patient's daily activity level.

Methods: This research is a descriptive study with a cross-sectional study design. The sample in this study was 78 patients undergoing hemodialysis who were taken using the purposive sampling technique—assessment of Fatigue using the PSF (Piper Fatigue Scale) questionnaire. Data analysis in this study used descriptive analysis to determine the variables' distribution, frequency, and percentage.

Results: From the research results, some respondents do not work by 92.3%. Several reasons cause them not to work again since chronic kidney disease. One of the reasons is that they feel tired quickly, so their activity is limited, and some patients feel that they are limiting their activities because they have an av shunt attached. Based on the results of the study that most of the respondents had undergone the HD process for 2-4 years (78.8%). The highest Hb values were in the range of 9-10gr/dl (88.4%).

Conclusion: Fatigue of patients undergoing hemodialysis increases. It is hoped that respondents can know and increase their level of self-efficacy after being vaccinated against covid-19

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Introduction

Chronic kidney disease is a progressive, irreversible kidney function disorder that causes the body to fail to maintain metabolism and fluid and electrolyte balance so which leads to uremia (Wilkinson et al., 2019). Chronic kidney disease consists of various stages, where the final stage of chronic kidney disease is called end-stage *renal disease* (ESRD). The data on chronic kidney disease continues to increase from year to year.

According to data from the World Health Organization (WHO), chronic kidney disease has caused the death of 850,000 people every year (WHO, 2017). This figure shows that chronic kidney disease is the world's 12th highest cause of death. According to ESRD patients (Endstage Renal Disease), the prevalence of chronic kidney disease in the world according to ESRD patients (Endstage Renal Disease) in 2017 was 2,241,998 people. In 2018, there were 2,303,354 people, and in 2019 there were 2,372,697 people. These data show an increase in the morbidity of chronic kidney disease patients every year by 3%. In Indonesia, the incidence of chronic kidney disease is 0.38% of the total Indonesian population of 252,124,458 people, so 713,783 people suffer from chronic kidney disease in Indonesia (Kemenkes, 2018).

Research shows that patients with chronic kidney disease who undergo hemodialysis experience decreased vitality, physical function and psychological condition, which decreases the quality of life. One of

the problems that patients who undergo routine hemodialysis often complain about is *Fatigue* (Watson et al., 2020; Yapa et al., 2020). *Fatigue* is the main complaint of patients undergoing long-term hemodialysis. Anaemia is one of the causes of *Fatigue* (Post et al., 2019; Yang et al., 2018). Patients with Hb levels < 11gr/dl will experience a decreased physical function, which causes limitations in carrying out daily routines and decreased psychological and social health (Gregg et al., 2019). *Fatigue* conditions in patients with chronic kidney disease appear to be caused by physiological and psychological factors.

Include discomfort, increased stress and affect the quality of life of clients undergoing hemodialysis. The activities of most patients during hemodialysis are lying down, talking with other patients, eating and drinking. Based on a preliminary study, 65% of patients feel bored with the therapy they are undergoing, which triggers stress in patients, ultimately affecting their psychological condition. Seeing this phenomenon, researchers are interested in researching how high the fatigue level is in patients undergoing hemodialysis at a hospital on the island of Bangka.

Method

This type of research is a descriptive study with a *cross-sectional design* to describe the *Fatigue* of hemodialysis patients assessed using the PSF (*Piper Fatigue Scale*) questionnaire. The univariate analysis describes the characteristics of chronic kidney disease patients

undergoing hemodialysis, including age, gender, education, employment status, and duration of hemodialysis. The population in this study were patients with chronic kidney disease who underwent hemodialysis routinely at a hospital on the island of Bangka. The total sample is 78 samples.

Results

This study used a sample of 78 patients undergoing hemodialysis. The demographic characteristics of the respondents were described by gender, education, age, length of HD, occupation and Hb value.

Table 1. Frequency Distribution by Gender, Age, Length of HD, Occupation and Hb Value

Data	Frequency	Percentage
Gender		
Female	30	38.5
Male	48	61.5
Education		
Junior School	High	12
Senior School	High	59
PT		7
Age		
31-40 years	10	12.8
41-50 Years	30	38.4
>50 years	38	48.7
Employment		
Working	32	41.1
Not working	46	58.9
Old HD		
2-4 years	61	78.2
4-6 years	14	17.9
>6 years	3	3.84
Hb		
7-8 gr/dl	5	6.4
9-10 gr /dl	69	88.4
>11 gr/dl	4	5.1

Based on this study used a sample of 78 patients undergoing

hemodialysis. The research was conducted in a hospital on the island of Bangka. This study's results indicate that most respondents' age range is >50 years (48.7%). For the most part, the gender of the respondents was male (61.5%). The results of previous studies also stated that most of the sexes were male as in previous studies.^{9,10} most respondents have high school education (75.6%). From the research results, some respondents do not work by 92.3%. Several reasons cause them not to work again since chronic kidney disease. One of the reasons is that they feel tired quickly, so their activity is limited, and some patients feel that they are limiting their activities because they have an av shunt attached. Based on the results of the study that most of the respondents had undergone the HD process for 2-4 years (78.8%). The highest Hb values were in the range of 9-10 gr/dl (88.4%).

Table 2. Questionnaire Fatigue Level
Fatigue Mean

Fatigue Level	Fatigue	
	Mean	SD
Total	6.31	0.15

The table above shows that the level of Fatigue in patients undergoing hemodialysis from 78 respondents was 6.31.

Discussion

Low education or even no school will affect the thought process. Education is a tool used to seek the truth. The research found that among



16 respondents, some had elementary education as many as nine (56%). So respondents with low education make it difficult for the elderly to understand information and situations.

Work can be an influential factor in *self-efficacy*, such as for respondents who are entrepreneurs. Of course, they interact more often with people. The results of the study amounted to 2 respondents (12%) working as entrepreneurs. So respondents are afraid because they often interact with other people by working as entrepreneurs.

Conclusion

Covid *Ganduefficacy* and a small proportion have *self-efficacy*. Based on the conclusions, the researchers provide the following suggestions: The results of this study are expected to add further information and knowledge to researchers regarding "About *Self-Efficacy* Elderly After Covid-19 Vaccine." Through this research, it is hoped that respondents can know and increase their level of *self-efficacy* after being vaccinated against covid-19. From this research, it is hoped that it can add references and information and become teaching materials for gerontic lectures for institutions related to " *Self-Efficacy* Elderly After the Covid-19 Vaccine". With this research, it is hoped that this research can add information and references regarding the *self-efficacy* of the elderly for Gandu Village, Bogor District, Nganjuk Regency

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